

6/11/46.

Assay medium + hydrolysate of cultures grown in excess precursor. Use 50% medium filtrate; hydrolysate as 1 ml equivalent of the completely grown culture / 10 ml.

8P18.

Diaz amid listed, 30°

1 229-1 Medium 50% Blank.
2 " " + Biotin - 58-3214. for proline.
3a " " Y38 for arginine.

very little in hydrolysate; considerable in hydrolysate
100
100

11. 229-2 Medium 50% Blank
12 " " + Biotin 58-3214 for proline. 100

21 229-5 " " Blank
22 " " Y38 - arginine. 100

31. 229-1 hydrolysate 1 ml. Blank
32 " " + biotin 58-3214 peel. 85¹
33 " " Y38 arg. 94³

41. 229-2 hydrolysate 1 ml 58-3214 ++ 83²

51 229-5 " " ~~Y38~~ arg. ++ 78²

61. 206. hydrolysate 1 mg. Blank
62 " + biotin 58-3214 peel. 77¹
63. " Y38 arg. 72

71 206 filtrate 50% Blank
72 " + biotin 58-3214 100
73 " Y38. 100

81 - T(0) Y38 =
82 T(B) 58-3214.

Diaz 11P 6/17/46.

K-12 Phage

235

12 JUN 1946

① 3P. Broz 50ml coli σ ϵ K-12. Shake at 30° .

1130 A13 - broz 1ml of ① + vir. phage comes into 50ml coli σ .

1. T-1

2. C

3. Sewage

4. Coli.

Incubate at 38° .

2P. - #1, 2 clear; 3, 4 turbid.

broz coli σ ϵ 1ml of grown K-12 + bre. 35° .

11. 1.

clear

12. 2.

clear.

13 -

Streak Phages on a K-12 plate (coli σ).14) $T-1$
"Coli" $T-1$
and C $\xrightarrow{\quad}$ K-12

Prepare 58-161 / 1:

15. ~~████████~~Cross streak on coli σ plate:K-12 58-161 679-183 B/r ~~████~~

T-1 — — — —

235-11 ~~████~~ — — — — ϵ secondary growth along streak.~~████~~

235-12 do.

C

do.

12M 11 *Escherichia coli* & *Staph.*, shaking at 30°.

- (1) 58-161
- (2) 679-183
- 3. Both.

* Plate tests minimal, heavily, after washing 1130 P12.

P15

1 ml	1	1	- No colonies.	0
grown	2	1 + B	- No colonies.	0
culture	3	1 + M	- Turbid plate. No colonies.	
4	2		- No colonies!	
5	2	+ T	v. distinct halos around adaptants.... 23. N14. +	
6	2	+ P	3	6.
7	1 + 2		- <u>2</u> seen N14.	(Some colonies may adapt <u>in</u> agar.)
8	3		11 P13. N14	again, some colonies come
9	3		13	up secondarily (after the
10.	3		12 100.	first) pick one colony - (236-9) to water + slant

same cultures. 1130 P13 (.48 hr.). T(0).

P150

11	1	
12	1	
13	2	0
14	2	0
15	1+2	0
16.	1+2	
17	3	4.
18	3	3

To recapitulate, in the following expts. wilds were found by interaction; only:

Date	1	2	1+2	3	Expt
5/31.	0	0			220
6/2	0	0	0	4+; 5+	224
6/11	0	0	0	0	233
6/12	0	0	3	10^2	236 a
6/13	0	0	0	4.	236 b.

In 5 attempts, no double revertants have appeared while prototrophs have repeatedly appeared in mixed cultures.

halo = turbidity around colonies. Consists of v. small colonies with diminishing density.

T-1 resistant.

13 JUN 1952

Used ~~K-12~~ 236 ♂ and 236 ♀ as mosa. $\text{ml} \approx 10^9$

1130P13

1. 58-161 10^9 + T-1 10^7 in coli α plate

2. 679-183 do.

3. 58-161 10^9 + T-1 10^7 in coli ~~α~~ flask. Incubate. Then plate 1 ml into coli α .

4. do. 679-183. all plates

5. ~~58-161 10^9 + T-1 10^7 in coli α flask~~5 Flasks of 3 ^{10A14 N14 7P14} turbid. Stake out on coli α .6. " 4. ^(one 4.5 ml)

Isolate colonies from stake plates to BM + PT medium respectively
~~to avoid "tryptophanless" resistant~~. Also, inoculate from
 5+6 directly.

10M.	5		
11	colony	-	
12	colony	-	Stake out on coli α N16. See 245.
13	:	-	
14	:	-	
15.	lig.	=	12N17 as if a. ↓ BM ↓ BM + Trypt.
PT.	6		
21	colony	+	Stake out on coli α 12N16.
22	"	+	
23	"	+	12N-17. colony to water
24	"	+	
25	lig.	+	

Cross streak 12 + 21 \in ~~K-12~~ 58-161.

disk for lysogenicity \approx 161.
 coli α plate,

Evidence re heterocaryosis -
Mutant in Recombination studies.

2 18

① 1145 P13. Dose 50 ml colicidē 227-1

1030 P14. Irradiate 4×10^4 mins. ~~P13~~ dose. Int. into 50 ml colicidē (A).
Washings: Dilute 10^{-2} and plate into colicidē and detection plates.
immediately.

1P16.

Conclude that survivorship only ca 10/cc.

1
2
3 1
4
5
6
7
8
00.

S 1 302.

Delete ① 10^{-1} + apparently killing was anticipated
layer \approx 1P16. Circle previous minute colonies.

Examine 4P, 11P16, 11A17, 10A18

2400 total.
tested.

1 colony found A17. 238-2.

no growth on picking.

2. 316.

Dil 1:10⁷ 11P15. corr = T(0) presumed.
Layer 1130 A17.

A 1
2
3
4
5
6
7
8
00. 91
Examine 9P17, 11A18, 12M19.

1 colony - surface? cont? 238-1 700 tested.
micro. not E. coli. Sarcina?

few variants to 12M19.

~~239.~~ Sex-plateing.

239

15 JUN 1946

Dose $\frac{678}{183}$ + $\frac{58}{161}$ (separately) 11 P 14. ~~After mixing~~

Dose ~~1 ml~~ 5 ml each into colis. 30° . Plate at varying intervals.
50 ml. heavily.
 $G(1:10)$ Wash (^{in 1st} separately) + plate as indicated.
(73°) level of culture.

9:45 P 15. Mix:

A 17.

96' cell (calc.).
 $5 \times 10^8 / \text{ml.}$

1st plating is 1 ml each
original culture = ca 5×10^9
added.

0 time.

1	161 early	0
2	183 early	0
5 ml each		
3		
1 ml each		
4.		1

1 hour. 11 0 96^2
2 ml. 12 0

2 1/2 hr. ~~21~~ 21 4. 95^2
1 ml. ~~21~~ 22 3 95 (94³)

designed
surface col.

19 hr. 41
42.

~~Use 2 ml cultures for inoculation, + repeat. Mix 41 P 16.~~

Transfer cultures to colis slants where possible, designs
as, e.g. 239-4a.

~~1230~~; phage C.; Segregation
(several ecotypes) 240

16 JUN 1946

1230 A 16. Pick colony from 236-9 to 1 ml H₂O.

0. Stake a T(0) plate N17. to H₂O → slant 240-1
T(0).

From companion & diluted 239, dil 1/2 : 100 : 1000 +
plate 1cc dil. into detection plates for recombinants.

Unfortunately, ca. 1²00/plate in ~~the~~ small colonies is normal (B)

Layne 1230 P 17.

1. BP 2 new.
2 BT
3 PM
4 HP
5 —

Stale filter 235-12 + dispense in 10 ml tubes.

Plaque out on 183. (2 ml mol.) 6 P 16. 4.9.

Test C again on K-12, 183, 161 by cross-streak 1A 18.

activity on K-12
non-active in 58-61

activity on 679-183 ??

Pick colonies 12 M 19. to D. See 245 for tests

all prototrophs

16 JUN 1946

1A Bro 161, 183 *salmonella* $\sim 30^\circ$ sh.

$$\rho S = 3 \times 10^5$$

SP 16. Irradiate 2 mins.

$$\rho S = 5.5$$

Wash both aliquots + dilute + plate as indicated.

1. 10^{-7} in ∞ 79. 7.9×10^8

A-	2. 10^0	in P	-	3
unmed.	3. 10^0	in P	-	3
	4. 10^0	in T	-	0
	5. 10^0	in T	-	0
	7. 10^0	in 0	-	0
	8. 10^0	in 0.	-	0

11. ~~10⁻²~~ } ∞ 27 2.7×10^3

$$\begin{cases} 10^{-2} \\ 10^{-4} \\ 10^{-6} \end{cases}$$

12. 10^0 P 0
13. 014. 10^0 T +++ 7 many small.
15. 2 large, in m. 3 + many small.17. 10^0 O. - 0
18. - 0

What are the small colonies?

4P17. A18

What are the small colonies ?? Can conclude anyhow that u-v increases reversion rate markedly.

5/16/46. 17.III.1946

Inoc 50 ml T(0) K-12 30° slv. 10 P16.

3 P17 harvest, centrifuge + sterile filter 25 ml sample. = x_1 .

1. x_1 5 ml + T(0) 5 ml. Add x_1 , steadily & autocl. ~~+++~~
2. x_1 5 ml + T(0) 5 ml. Autoclave together. ~~+++~~

9 P17 harvest second sample = x_2

- 3 x_2 5 ml 5 autocl x_2 . \pm
4. x_2 5 ml autocl. \pm

Inoc \approx 58-3214. 1220A18. 30°.

On 183 + T plates — filter paper techn.

- a. .1cc x_1 . —
- b. .1cc x_2 . —
- c. (a) 10r proline +++
- d. .1cc x_1 boiled. —

There is evidently a considerable termination as growth proceeds.

Add 10r proline to 4 1130P19. +++

15 JUN 1953

Braz Dmld \approx 161,183 1A17 30° sh.3 P17. (14h.) ca 25 ml. each + 50 ml \approx 30° S shelving.

930 P17. Plate out: 1 ml equiv. after washing. Plate in this layer.

		TP 19
1	0	10
2	0	11
3	0	9
4	.5 ml	13
5	.2 ml	4
6	MP	turbid;
7	MT	"
8	BP	++ colonies
9	BT	++ colonies. 10 ⁴ ?

Isolate 20 colonies from surface
of each. Satellite colonies quite
stabilizing in both cases.

See 145 for tests

U-V Induced reversion.243
244.

17 JUN 1946

Use 679-183 cells of exp. 243

430P. Irradiate in medium 1 min. Shutter exposure
Unirradiated:1. 10^{-7} ∞ Wash $^{30-}$ both: not properly countable.

$$\gamma S = 53$$
$$\rho S = 1.7$$

2. 10^{-7} ∞ . 80 (8×10^8) 3. 10^0 T 214. 10^0 T 125. 10^0 T 116. 10^0 P. Turbid!?11. 10^{-2} } 10^4 (1.5×10^7) 10^{-4} } 10^{-6} }

15.

12. 10^0 T 013. 10^0 T 214. 10^0 T 015. 10^0 P. Turbid Turbid!?16. 10^{-2} T 0Knoz. coli \in 50 ml. $\bar{\epsilon} = 10^0$. (A). 5P17. 56. 30°

Effect here is very slight. Use longer killing.

Wash
put in
 $\frac{1}{2}$ T.

Recombination Tests

245.

a

19 JUN 1946

Test: B M BM P ~~T~~ PT BM Tryp

237-12

• ++

~~BTPM~~

~~-T~~

• ++. OK.

243-8-1 -B -P ~~-T~~ = -o/ o

1	++	+	++.
2	++	+	++
3	++	++	++
4	++	++	++
5	++	++	++
6	"	"	"
7	"	"	"
8	"	"	"
9	"	"	"
10	"	"	"
11	"	"	"
12	"	- +.	Streak out
13	"	+	++
14	-	-	(short rods) (Hooray!). See c.
15	++	-	++
16	++	++	++
17	"	"	"
18			
19			

Most of this is clearly synaptogenesis.

238-1

• - • - Not coli.

238-2 n.g. 00

• . .

243-9. From BT Plate.

21 ++ ++ ++

22 do.

23 do.

24 do

25 do

26 ++ - + + Streak out.

27 ++ + +

28 ++ + +

29 ++ - + +

30 ++ + +

31 ++ + +

32 ++ + +

33 ++ + +

34 ++ + +

35 ++ + +

36

37

38

39

40.

Streak out

Recombination tests, etc.

245

b.

19 JUN 1946

BMPT.

0

240-1/41
240-2/42
240-2/43
240-2/44
240-2/45

240-1 41 ++ ++

Small colonies on T/0)
but not broodiness mutants.
Morphological ??

240-2 43 " "
44 " "

-3 45 " "
46 " "
47 " "
48 " "
49 " "

4 50 " "
51 " "
52 " "
53 " "

5 54 " "
55 " "
56 " "
57 " "

long rods; hazy internal structure.

Recombination tests

245c

Analysis of a possible recessive recombination:
#14. BP?

N 21. Streak out on ∞ plates; no slants to keep.
comes to H₂O. \Rightarrow slants N 22.

Test on large tubes B: - P: - BP: - (medium?) add M to each.
B - P - = BP T = BT = 0. $\beta^M!!$

141 B - P - = BP T = BT = 0.

142 -

143 -

144 -

145 -

146. -

Check on diff. x dig: - B - - M = - P ~~M~~ - T. = - 0

679-188 ++ ++ - - +
58-3214 - ++ - ++ ++ Do M generally lacking?

151 -

152 -

153 -

261 -
262 -
263 -

These ecotypes are n.g. See set 249.

Sex: plating Exp. n. 9.

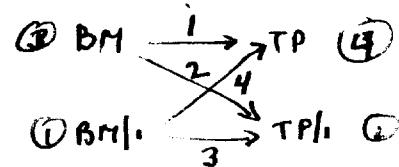
-46

Segregation of resistance to T-1

19 JUN 1940

1A 20 More *str. coli* \times 30° sh.

- (6) 23712 BM/₁ (trypt.??)
- (1) 23721 TP/₁
- (3) 58-161
- (4) 679-183.



11 30 A 20. 5 ml each in sterile test tube. 30°.

1. (3) + (4)
2. (1) + (2)
3. (3) + (3)
4. (1) + (4)

5 P 20. Plate 1 ml eq. (after washing) in thin layer. T(0) \neq a = 0, ... x.

#	a	
1.	①	0 ++
2.	②.	0 0
3.	③.	0 0
4.	④	0 ++
5.	①	BM. T.
11.	2	0
12	3	0 +
13	4	0
21	1.	0 ++
22	1.	0 B
23	1. \times	B
24	1. 10^{-2}	B
25	1	M
26	1 10^{-2}	M
27	1	P
28	1 10^{-2}	P
29	1	T
30	1 10^{-2}	T
31	1	BP
32	1 10^{-2}	BP
33	1	BT
34	1 10^{-2}	BT
35	1	MP
36	1 10^{-2}	MP
37	1	MT
38	1 10^{-2}	MT

39.	③	B	-
40	③	H	T
41	④	P	10^{-3}
42	④	T.	"

ie 2 47 - use
these for
controls.

Colonies through depth of agar
Must assume contamination
of agar or solutions, etc.

also lack of difference between 33+34, etc.

F = surface colonies. Not appl. to 1-5.

39-42

which were not found
them on surface.

24 JUN 1946

After 50 ml colic \approx at 30° 8A24. 5P25. Wash + irradiate
in H₂O. in Q. tube

J. 671-183.

dead. add 1ml = to T (Threon) agar.

1 0 4

2 0 3

3 $\frac{1}{2}$ min

4 "

5 2 "

6 "

7 4 "

8 ~~4~~ " +++ but only very minute colonies. Possibly only survivors
using product from killed cells.

Prototraph recombinationsbroz. ~~12/22~~. 12M 2P.O 50ml x sh 30°

- A. 58-161
 B. 58-336
 C. 679-183
 D. 679-680.

5 ml each. 3P2~~1~~ 30° mesh.

1. A+C
 2 A+D
 3 B+C
 4 B+D.

T(0) + plate out 1 ml eg. 11P2~~1~~. Use washed agar.

1.	A	-
2	A	T
3	B	-
4	C	-
5	D.	-

11	1	-
12	2	-
13	3	T
14	4	-

21	1	BT	Turbid.
22	1	PM	-
23	1	BP	-
24	1	TM	T.

31	1	10^{-2}	BT	-
32	"	PM	-	T;
33	"	BP	-	①
34	"	TM	-	

41	.5	B	T.	-
42	"	M	-	
43	"	P	-	
44	"	T	-	T
45	"	O	-	-

51	A	BM	-	-
52	A	B	-	
53	B	T	-	
54	C	TP	-	
55	C	T	6	
56	D	T	-	3
57	D	L	-	

This may not be a good method to cross these bugs!

Other recombinations
Phage Resistance Segregation.

249

22 June 1946.

11P21. Broz. 50 ml colis sh 30°:

A 58-161
B 679-183
C 58-161/1
D 679-183/1

E 58-278-Y24 (in yek-pept + cystine 1 mg).

4P22. 5 ml each. as in 248.

1 A+B
2 C+B
3 A+D
4 C+D
5 B+E

9P abandoned in view of 248

8Y5P22 Broz 10 ml each into 50 ml colis as above T
- rather - inoc tubes 1-5 into 50 ml colis.

2A23 - streak & plate as before.

1.	1	0	-	
2.	2	0	-	
3.	3	0	-	
4.	4	0		
11.	5	0	-	
12.	5	BΦ	1	
13.	5	BC	7	
14.	5	T	1	32
15.	5	P	6	
17.	5	BΦT	2	13
18.	5	BΦP	4	
19.	5	BC(T)	2	++ cont?
20.	5	BCP	38.	
16.	5	O	1	
21.	E	O	-	
22.	"	BΦ	A24	A25
23.	"	BC		
24.	"			

main plates look contaminated. Do not keep.

June 24, 1946.

8A24. Mix together into colid^o (or α -cyst-glycine = C).

30° 5 hr.

1. 58-161 + 679-183 C

2. 58-161/1 + 679-183

3. 58-161 + 679-183/1

4. ~~58-161/1 + 679-183/1~~ C

5. *79-183 + 424. C

3P25. Harvest + plate. 1 ml = .

1. 1 0 $\frac{7(0)}{0} + \frac{6P26}{C(0)^2}$

2. 2 0 ⑤

Streak out See 254.

3. 3 0 0

4. 5 0 ④

5. 5 0 ④

6. 5 0 7

11. 5 P 13

12. 5 T 19

13. 5 BΦ 6

14. 5 BC 6

15. 5 BΦP ⑫

16. 5 BΦT ⑬

17. 5 BCP ⑭

18. 5 BCT. ⑮

No quantitative evidence for massive recombination.

24 JUN 1946

8A24. Broc into \approx C. 50 ml; T(0) + pombe. 50 ml
 \times 10 ml.5P25. tube ++ oxygenation ??
flasks ± und glucose & doubt.930P25. Est. hemocytometer: 2.6×10^6 /ml.Use 2×10^{-4} dilution + plate in F(pv)

1. In thin layer —
2. In thin layer, covered ✓
3. As col. o. n.g!!!

Colonies first noted in F(pombe vits) A 28. ($2\frac{1}{2}$ days). These are rather variable. Large colonies near surface. May be intrinsic heterogeneity. Isolate colonies from base plate.

uniform. Pick from single colony ^{P28; A 29.} Good size colonies. More streak out on col. o.

26 JUN 1946

Use 1 ml grown cultures as inocula.
6P26.

1. Y40 + Y41.

2. Y40 + 183 Compare 250-2

3. Y41 + 161. Compare 250-3

4. Y24 + 183

10P27 12 M 26. Wash etc + plate in 7(0). 1 ml = .
P28.

1	1		3	1	22
2	1				14
3	1				63
4	2		10'	10' 1A29.	30
5	2		10'		"
6	2		10'		"
7	3		1?		13
8	3		0		7
9	3				9
11	4	●	ca 30		
12	4	B	30		
13	4	B			
14	4	B			
15	4	Bφ	10 ²	1A29.	
16	4	BC	10 ²		
17	4	P	10 ²		
18	4	T	10 ²		
21	4	Bφ T	10 ²		
22	4	Bφ P	10 ²		
23	4	BC T	10 ²		
24	4	BC P.	10 ²		

Refugiate

abandon test on these
in favor of the more
efficient Y24 (BφC)
with Y41 (BTF'R).
with the additional character R.

12 M 30. Strike out 1, 3 & colonies. see 257

Bacterial nucleoprotein.

26 JUN 1946

A.M. Exps. \approx 12 hours \approx culture K-12. Marked increase in stickiness of bacteria noted after 5 fusing + thawings in .9% NaCl. Considerable material extractable \approx 90% which pptd. ∞ alcohol infibrous form (RNP?) residue still sticky + fibrous. Treatment with 6% NaCl removed stickiness, but supernatant failed to ppt or dilute, + apparently still had many intact cells. Probably freezing should have been avoided more.

11 P.M. More cols \approx \approx 58-161 for exps. next day of similar nature.

Conclusion: considerable amount \approx 9% Nothing then removed \approx 6% NaCl

100 ml culture 10 hours old. Centrifuge. Reit supernatant.
Suspend residue in .9% & centrifuge again. Suspend
residue in .9% ^(ca 20°C) and freeze + thaw ~~7 times~~. 7 times in a CO_2
bath. Centrifuge. Supernatant - 1.

Residue + .9% eth + cent. Supernatant 2

S1, S2 + alcohol. no ppt. Residue not as sticky as yesterday

Residue + 6% Residue much stickier.

nothing extractable

27 JUN 1948

Suspend colonies of 250 in H_2O + streak over on *coli* σ ; moi. slants.

250- Test, A 29.

21	2	$BM/1 \times PT$, $T(0)$.	+ T-1 resist.	a + b + c + d + e + f + g
22	2		+ +	
23	2		+ +	K-12 # -
24	2		+ +	Y40 +
				Y41 +

11 1 $BM \times PT$. Streak over again. 227-1
12
13 controls

25	2	+ . T-1 resist.	+ +
26	2		+ +
27	2		+ +
28	2	: T-1 res. series + a + b + c + d + e + f + g + h +	all green (-) on $T(0)$! Check on reg. See below:
29	2	$T(\beta)$ $T(\beta)$.	255

41 4 + + * Proto * transfer to σ slants +
42 4 ~~4~~ + + * Proto

51 5 - + * Proto check later. (260)

52 5 + + * Proto Total tested for B.

53 5 + + * Proto
54 5 + + * Proto
61 6 + + * Proto
62 6 + + * Proto
63 6 + + * Proto
64 6 + + * Proto
65 6 + + * Proto
66 6 - + * Proto Total tested for B, - 28

$B -$ (Test.) 5

131 13 + ~~(B)~~ (B) + (O) + * Biolin-less. Later test - did

not grow on
7/19/46 B alone.

PT
* BOC
on
Bphi
won
Breg.

141 14.
20 BOC. 2

*	4	+ +	+ +
*	5	+ +	+ -
*	6	+ +	+ -
*	7	+ +	+ -
*	8	+ +	+ -
*	9	+ +	+ -
*	10	+ +	+ -

Proto.

Proto.

* growth in (O) when B may be infected.

Read 830P 29.

157
1
2
3
4
5
6
7
8
9
0

161
2
3
4
5
6
7
8
9
#

171
2
3
4
5
6
7
8
9

181
2
3
4
5
6
7
8
9

? 9 - + - check: (P.)

(3)

B_q

Retest from column 3.

-	P	B _q P.
+	+	+
+	+	+
+	+	+
+	+	- B _q P?
+	+	- B _q P?
+	+	P
+	+	P
+	+	P

B_qP

(B_qP)

- Repeat in small tubes:

B_q -
P -
B_qP +

(P)

Repeat again in 10cc tubes
in uniform mould from diastable:

B -
φ -
P -
B_q -
P_φ -
BP +
B_qP +

7/1/46.

There can be no doubt then that
this is B_qP which would be a recombinant
type for the cross:

B⁻φ⁻C⁻P⁺T⁺ × B⁺φ⁺C⁺P⁻T⁻

P -
B_qP -

-
-
-
-
-
T.

check:

(P.)

from test plate: Requirements of 254-28. known 1.

28.

B.M. P.T.

BPMT.

Later check: B-71-

12 M 26.

See

Escherichia coli 227-1. (Ultra-violet.)

SP 29 (40L.) Irradiate $\frac{1}{2}$, 1, 2, 5 min + mix 1 ml in colis
50 ml. Incubate each of these dilutions in colis plates for
approximating killing 8h. liquid cultures; incubate plates 30°

2 - ca 10000 surv. (x50) $\rho S = \log \frac{10^5}{10^9} = 4$.

5 - ca 2 x50.

Plate out ② at 10^{-7} . in T(0) detection plates. 11P 30.

330P2. Large + irregular. (CSH)

11 P12. Made numerous small colonies. Incubate.
ca. 1%

10A14. Picks to complete (not all, only those most convenient by
way of isolation). Slant. A15...

1
2
3
4
5
↓

Test Recombinants Exp. 252

251.

29.III.1946

Streak out on coli^{so} plates. Number in orange to test from 255

V40+V41	1	11 12 13	T-1 cued colony R±?	all resistant 6.	T(0) col.
	2	21 22 23	R±?	<u>all resistant</u> : 7	

V41+161.	7	71 72 73 74	S ✓ S S	S	
	8	81 <u>82</u> 83 84	S ✓ R S	S S	-
	9	91 92 93 94	S ✓ RR SS	S RS SS	all +
	4:	41 42 43 44 45 46 47 48 49 50	S X ✓ R R S R R R S. R R S R. S R. S R. S R.	-	
Y40+183.					

Linkage of
R to B or M?

Isolate several colonies from 82+ test:

821	92
822	R
823	R
824	R
825	R
921	S
922	S
923	S
924	S
925	S

all +

Phage analysis of Protoplasts.

258.

30 JUN 1946

N30 broc coliss = mid. cultures for expt. below. 42.30°/24h.

1130P. broc 50 ml coliss 1 ml: + T-1 10⁻¹ 24.30°

1. 257-71a. (183R × 161S) S. " 1030A1." complete lysis.

2. 255-24 (183S × 161R) R. Full grown.

N1. Plate and streak out -

1. 1. 10⁰
 2. 1. 10⁻²
 3. 1. 10⁻⁴ ca 10² → See 262. Isolate colonies + test for
 T-1 res. + T(0) growth.

11. 2. 10⁻⁷ T(0)d. ca 10². } no mutants present.
 12. " " ca 10⁻²
 13. " " ca 10⁻²
 14. Streak $\overline{\text{D}}$. doubtless.

330P2 Layn & 10 + refrigerate at 12 N 3.

259-C2 ^{from} $B^+/l \times B^- \dots \rightarrow B^- l$

259-C6 $P^- l \dots \times P^+ \dots \rightarrow P^- \bullet$